

Notice of Allowability

Application No.

09/810,971

Examiner

Michael J. Simitoski

Applicant(s)

HUANG ET AL.

Art Unit

2134

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the response of 10/24/2007.
2. ☒ The allowed claim(s) is/are 1-5,7-9 and 12-22.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☒ Other See Continuation Sheet.

4 sheets

Continuation of Attachment(s) 9. Other: Copy of PTO-892 of paper nos. 20070509 and 09212001.

DETAILED ACTION

1. The response of 10/24/2007 was received and considered.
2. Claims 1-5, 7-9, 12-27, 29-31 & 34-45 are pending.

EXAMINER'S AMENDMENT

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Robert Kalinsky on 12/17/2007.

The application has been amended as follows:

Please **CANCEL CLAIMS 23-27, 29-31 & 34-45.**

Allowable Subject Matter

4. The following is an examiner's statement of reasons for allowance:
5. Regarding claim 1, **U.S. Patent 6,104,812 to Koltai et al. (Koltai)** discloses determining a required plural number of watermark layers (Fig. 15) and a dot patterns/secondary images for each of the plurality of watermark layers (pixel pattern of the actual layer to be modified),

selecting at least one latent image object/secondary images for each of the plural of watermark layers (col. 4, lines 11-16) and embedding each latent image object/secondary images into its respective watermark layer (col. 4, lines 11-16), superposing the watermark layers to form the watermark/overall secondary image (col. 4, lines 40-44) , defining and generating a decoder for each watermark layer (col. 4, lines 11-16) and applying the watermark to the document/primary image (col. 4, lines 11-16). **U.S. Patent 6,252,971 to Wang** teaches that by using phase-modulated stoclustic screens (col. 2, lines 32-35), retrieval of a watermark after the image has been transferred to a printed copy is easy and provides clear, visible results (col. 5, lines 3-5). The halftone image is embedded using phase-shifted (phase-modulated clusters) (col. 3, lines 54-55, col. 4, lines 1-3, 29-34 & Fig. 7), whereby the watermark can be visualized by overlapping the stoclustic screen (phase-modulated dot pattern) with a checkerboard pattern (decoder) in the same halftone frequency (col. 4, lines 36-44). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Koltai to specifically embed each latent image object into its respective watermark layer by phase modulation. One of ordinary skill in the art would have been motivated to perform such a modification to make retrieval of a watermark/embedded latent image (after the image has been transferred to a printed copy) easy and to provide clear, visible results, as taught by Wang (col. 5, lines 3-5, 54-55, col. 4, lines 1-3, 29-44 & Fig. 7).

However, the prior art of record fails to teach or disclose, either alone or in combination, the dot pattern having a fixed frequency for each direction in the dot pattern, and a decoder for each watermark matching a phase unmodulated dot pattern of each corresponding watermark

layer, in combination with the other elements of the claim. Claims 2-5, 7-9 & 12-22 are allowable under similar rationale.

6. Further, the claims previously rejected under 35 U.S.C §101 have been canceled by the above Examiner's amendment and the previous rejections of claims 1-9, 12-31 & 34-45 under 35 U.S.C. §112 are overcome by applicant's arguments (see response of 10/11/07, §I A) and also by the above Examiner's amendment cancelling claims 23-27, 29-31 & 34-45 (p. 9, ¶12).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Simitoski whose telephone number is (571) 272-3841. The examiner can normally be reached on Monday - Thursday, 6:45 a.m. - 4:15 p.m..

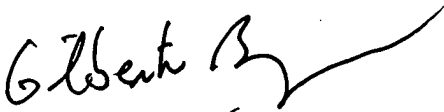
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kambiz Zand can be reached on (571) 272-3811. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

December 17, 2007
MJS
/MJS/


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